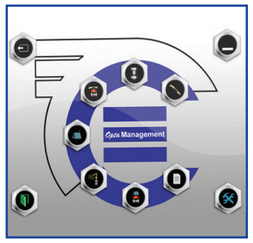
IQVu

Torque data collector

CheckStar Multi

- ✔ In line rotary torque transducer with optional angle measurement
- ✔ Accuracy +/– 0.25% of full scale

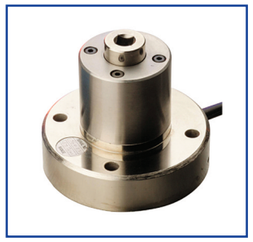


OMS

- ✔ Single database to store torque information from all departments
- ✔ All data completely traceable and secure

IQWrench2 *Opta*

- ✔ Point of load insensitive
- ✔ Interchangeable head attachments with auto ID and calibration



Static Transducer

- ✔ Suitable for measurement of all continuous drive and hand torque tools
- ✔ Accuracy +/– 0.25% of full scale

IQVu

- ✔ Torque data collector and audit tool
- ✔ Peak, Click, Pulse, MoveOn, Yield and Track measurement modes

tJRS *Opta*

- ✔ A joint simulator using a threaded fastener and nut
- ✔ Fully automatic quick release of fastener

TorqueStar *Opta*

- ✔ Torque or force indicator and data collector
- ✔ Simple readout to comprehensive audit tool

Service Centres

- ✔ Centres throughout the world
- ✔ Fully traceable calibration and repair service

Crane Electronics Ltd
Watling Drive
Sketchley Meadows
Hinckley LE10 3EY
United Kingdom
☎ +44 (0)1455 25 14 88
+44 (0)1455 61 47 17
@ sales@crane-electronics.com
www.crane-electronics.com

The force in torque management

Crane Electronics Inc
1260 11th Street West
Milan
Illinois 61264
USA
☎ +1 309-787-1263
+1 309-787-2099
@ salesusa@crane-electronics.com
www.crane-electronics.com

IQVu/UK/14/02

IQVu

Torque data collector

Key Features

- ✔ Torque data collector and audit tool
- ✔ Fully rugged
- ✔ Tempered “Gorilla” Glass
- ✔ High resolution 7” colour display
- ✔ Android OS secured by SOTI
- ✔ Interfaces to existing Crane products
- ✔ Peak, Click, Pulse, MoveOn, Yield and Track measurement modes
- ✔ Torque, angle and impulse count plus RPM
- ✔ Choice of measurement units
- ✔ User selectable frequency response
- ✔ Bi-directional measurement of torque and angle
- ✔ Upper and lower specification limits, plus control limits for torque and angle
- ✔ Display of realtime torque curves
- ✔ Time and date stamped readings
- ✔ Automatic transducer recognition
- ✔ Icon based clear and easy read display
- ✔ User selectable language options
- ✔ 8 hours battery life with external charger
- ✔ Password protection for user security
- ✔ Easily backed up
- ✔ Communicates with your PC system
- ✔ Multi transducer input

Product Overview

IQVu is the most revolutionary torque data collector in the world. It combines all of the features of the established TorqueStar with a market leading, robust tablet, to give a modern and familiar product. It provides the ideal solution for the measurement and collection of torque, angle, and pulse data in the manufacturing and quality environment.

The tablet is sleek, thin, but tough, certified to a MIL-STD810G 1.8m (6’) drop rating along with IP65 ingress protection. It has been carefully engineered, down to the chassis, to be protected against drops, shocks, spills, vibration and more. The screen of the IQVu uses Tempered Glass and features LumiBond™ optical bonding. This results in a display that is not only extremely robust and scratch resistant, but also very durable and easy to read in most lighting conditions.

www.crane-electronics.com

Product Overview - continued

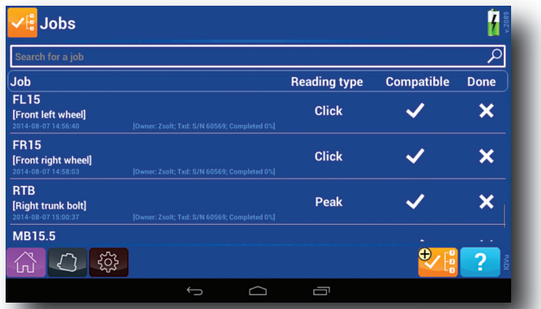
By using ultra-sensitive multi-touch technology the screen has been developed to respond effortlessly to touch, press, drag - even from an input from a gloved hand.

The comprehensive audit tool performs bi-directional measurement in Peak, Click, Pulse, MoveOn, Yield and Track measurement modes. The “Quick Check” function allows the operator to take measurements as required. Work can be scheduled using Rounds and Jobs to allow a planned approach to collecting data. Input of information is either via the soft keypad on the screen or downloaded from OMS or Opta Comms. The IQVu can also be interfaced with a customer's existing data management system.

The high resolution 7” screen clearly displays all relevant information, using colour to enable the operator to easily view and interpret the information. Throughout the measurement process relevant measurement values are displayed along with a realtime graph of the tightening trace if required.

Measurement readings and associated information are stored on the IQVu. In addition detailed individual readings of traces are stored. All of this information can then be saved to a USB stick or emailed directly from the device. Alternatively, it can be uploaded to OMS, Opta Comms or another existing database.

PDFs of documents, work instructions, photographs, and comments can be loaded onto the IQVu and stored against Jobs. As well as being loaded from a USB stick, photographs can also be taken using the 5 mega pixel auto focus camera built into the IQVu. This enables the operator to take photographs of applications to store against relevant readings, if required for later analysis. Advanced help functionality is available from all screens.



IQVu
Torque data collector

Product Overview - continued

With the addition of a barcode reader (optional integrated or external) the operator is able to scan information into the IQVu. This includes product or part identifiers, user details, comments and references.

Security of the IQVu and any data collected is a priority for users. All data can easily be backed up to an external source with minimal key presses. Equally such data can be restored to the IQVu with the same ease.

The integrity of the IQVu is protected by a world leading software security package, installed on the IQVu before shipping. This ensures that no software can be loaded onto the IQVu without authorisation and email traffic is strictly controlled.

With Wi-Fi, RF, Bluetooth and 3G available, the IQVu can be connected 24/7 wherever you are, allowing you to improve productivity.

The IQVu works with existing Crane products and all new Crane products, including the increasing range of Crane wireless devices, allowing further flexibility when collecting data.

IS Static

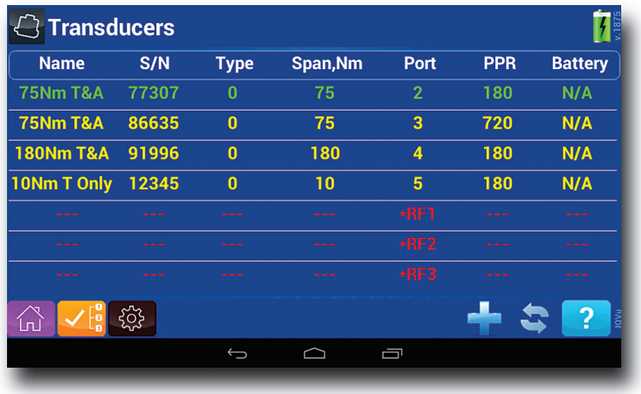
CheckStar Multi

UTA CheckStar

PC

IQVu
Torque data collector

IQVu - Screen Shots

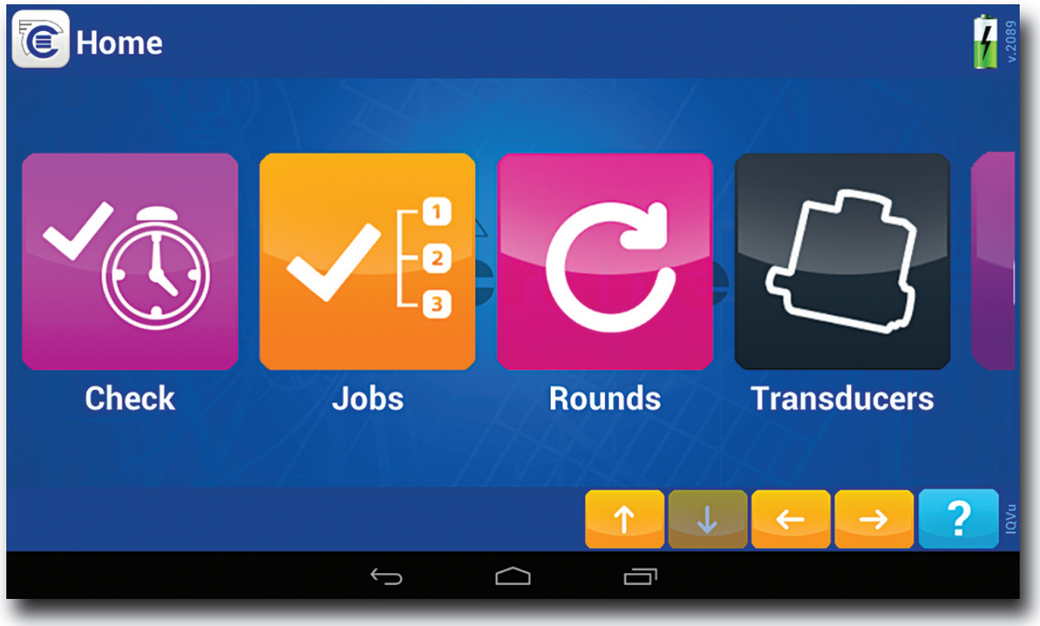

Transducers
Name S/N Type Span,Nm Port PPR Battery
75Nm T&A 77307 0 75 2 180 N/A
75Nm T&A 86635 0 75 3 720 N/A
180Nm T&A 91996 0 180 4 180 N/A
10Nm T Only 12345 0 10 5 180 N/A
*RF1
*RF2
*RF3

Transducers

- ✔ Designed to work with the new CheckStar Multi
- ✔ Compatible with in line UTA and IS rotary torque transducers
- ✔ Configure up to 6 RF Transducers
- ✔ Torque, angle and pulse count
- ✔ Setup user defined names for all connected transducers
- ✔ Automatic recognition

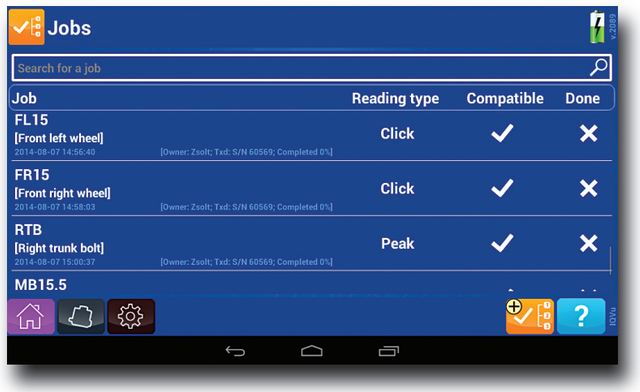
Home Page

- ✔ Simple menu structure for ease of use
- ✔ Large icons for easy navigation when wearing gloves
- ✔ Familiar “swipe” gesture to reveal more options
- ✔ Battery charge status always visible



Check Measure

- ✔ Take measurements with minimal key presses
- ✔ 1 click change between measurement modes
- ✔ Large display with reading values and rundown trace
- ✔ Peak, Click, Pulse, MoveOn, Yield and Track measurement modes
- ✔ Zoom into trace
- ✔ Save details to USB/Email



Jobs

- ✔ Assign photos and instructions to Jobs
- ✔ Simply add a name to convert Check Measure into a Job
- ✔ Clear and simple Job list including progress monitor
- ✔ Download Jobs from PC via existing Crane PC Software
- ✔ Sort Jobs into Rounds
- ✔ Provide statistical analysis

Settings and Users

- ✔ Easily configure global settings
- ✔ Add users with permissions, access rights and photos
- ✔ Password protection available
- ✔ User selectable languages
- ✔ Trace readings to user
- ✔ Easy back up and restore of settings

www.crane-electronics.com

IQVu - Technical Specification

Physical measurements	Bi-directional torque and angle*; pulse count, pulse rate; RPM* (*when using a rotary transducer with angle encoder in Track mode).
Measurement Units	Nm, Ncm, lb ft, lb in, oz in, kNm, klb ft, kg m, kg cm
Measurement Modes	Peak, Click, Pulse, MoveOn, Yield and Track
Automatic transducer recognition	Torque range, angle encoder PPR, Transducer serial number, Calibration due date torque@2mV/V (CheckStar Multi only)
Types of Transducer	CheckStar Multi, UTA and IS (CheckStars and Wrenches)
PC Compatibility	Communicates with OMS and Opta Comms.
Data Storage	16GB storage, Micro SDHC (up to 32GBytes) slot.
Processor	1GHz Dual Core Processor
Operating System	Android 4.1
Statistics	Count, Mean, Standard Deviation, Range
Print	Wi-Fi printer (TBC)
Display	7.0” TFT LCD WSVGA, 1024 x 600 pixels resolution, adjustable brightness. Touch sensitive with gloves worn. Tempered glass featuring LumiBond ® optical bonding.
Cycle Status Indicators	Colour, Sound and Vibration (all user definable) External light ring indication on CheckStar Multi
Graph of Tightening Trace	Available in realtime, resolution down to 1mS. Zoom feature available. Torque vs time (default), angle versus time and torque versus angle.
Data Entry	Numeric and Alphanumeric via soft keypad on screen. User interface via graphical icons that are language independent.
Operating Language	English, French, German, Spanish, and Chinese - Toggle between multiple languages.
Transducer Calibration Date	Transducer out of calibration warning.
Construction	Soft rubber trim surrounding tough internal chassis. Tablet will survive 1.8m (6 ft) drop
Torque Measurement	5 digit display with resolution to 0.006% of transducer span. Sampled every 20 micro seconds (50,000 per second).
Zero Stability	< 0.1% FSD / °C
Static Accuracy	+/-0.25% FSD of connected transducer.
Angle Measurement	Display angle to 0.01 degrees. Sample every 1000 micro seconds Automatically adapts to PPR of angle transducer using quadrature phase measurement.
Security	IQVu protected by SOTI MobiControl, which allows preset control of downloads and uploads to the device. Multiple user logins with password protection
Frequency Response	User selectable 75Hz to 5000Hz low pass Bessel Filter is employed for conditioning the transducer signal to eliminate ‘noise’ from the tool measurement.
Power	International Charger 12V @ 2 A from 100-240VAC; 50/60Hz
Batteries	Internal Lithium Polymer battery pack with 7600mAh capacity. Useable battery life 8 hour shift with normal usage.

IQVu
Torque data collector

IQVu - Technical Specification continued

Power Management	User selectable sleep timer and power saving feature
Ports	25 pin female D-type for transducer connection. DC Power port mains power and charging batteries. USB port to accept connection to PC or USB memory stick. SD card slot.
Communications	USB ver 2.0 (host and client), Bluetooth (v2.1+EDR class 2), WLAN 802.11 b/g/n
Camera	5 Mega pixels auto focus camera. Photos can be attached to job or individual readings.
GPS	GPS position can be associated with reading.
Time	Realtime clock. Date and Time stamp for each reading.
Barcode	Optional Reader available.
Operating Temperature	-20°C to +50°C
Humidity	10-75% non-condensing
IP Rating	Tablet is MIL-STD-810G and IP65 certified.
Warranty	2 years parts and labour against faulty workmanship or materials. The second year of warranty is only valid if the unit has been recalibrated at an authorised Crane Electronics Service Centre after the first year.
Dimensions/Weight	218mm x 162mm x 44mm, 1040gm (including handstrap)
Work Instructions	Work instructions in form of jpg image or pdf file can be associated with job.
Readings, Jobs and Rounds	Readings can be simply taken using the Check function. Alternatively they can be organised into Subgroups, Jobs and Rounds. All readings can be viewed and stored on the IQVu and analysed using the Graph and Statistics function.
DC Tool connection	The IQVu can talk to a DC Tool Controller using Open Protocol over Wi-Fi and associate the tool reading with a reading from transducer.
Export	Torque readings can be exported as a CSV file user reports.

IQVu - Product Codes

IQVC1-0TT1-CRXXRX	IQVu Torque (IQVu and Torque Module combined)
IQVC1-0TT1-CRXXRB	IQVu Torque with Integrated Barcode Reader (IQVu and Torque Module combined)

IQVu - Accessories

IQVU1-0001-CRXXRX	IQVu
IQVU1-0001-CRXXRB	IQVu with Integrated Barcode Reader
IQVT1-0T00-CRXXXX	IQVu Torque Module
IQVUS-0000-CRPXXX	IQVu Power Supply
CBL-7025-02CR-0-0	CheckStar Multi Cable

IQVu Torque - Packing List

IQVu (x1)
IQVu Torque Module (x1)
PSU and country specific interchangeable plugs (x1)
IQVu handstrap (x1)
Stylus (x1) and spare stylus tips (x2)
Wrist strap (x1)
IQVu Quick Start Guide (x1)
IQVu User Manual (CD) (x1)
IQVu Carry Case (x1)

www.crane-electronics.com